

STILLMAN NEWSLETTER



©SUMMER 2011

SEX AND THE SINGLE FIREFLY

– Mark Spreyer

*Two by two and side by side
Love's gonna find you yes it is
You just can't hide*

–Seth Justman & Peter Wolf (J. Geils Band)

Often I open these articles with some quaint quotation from bygone days. Not this time, not with lightning bugs. Nope. This story calls for rock'n'roll.

But first, when it comes to fireflies, we need to do some entomological house cleaning.

None of the Above

For the record, fireflies or lightning bugs are neither flies nor bugs. True flies (Order Diptera) have only one pair of wings. "Fireflies" have four wings.

While true bugs (Order Hemiptera) have two pairs of wings, the base of the front wings are thickened and leathery while the tail end is membranous. This is not so with "lightning bugs."

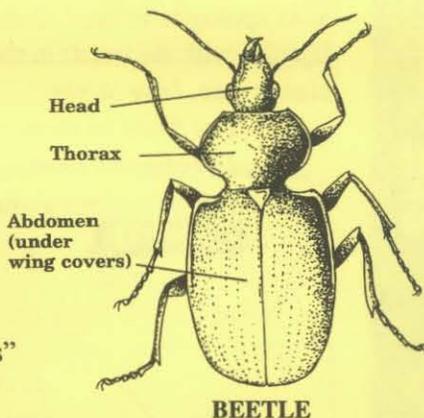
A lightning bug (aka firefly) is actually a very soft-bodied beetle that looks like it has had its head removed.

You see, all insects have three major body parts: a head at one end, a thorax in the middle (where the legs and wings are attached), and an abdomen at the other end.

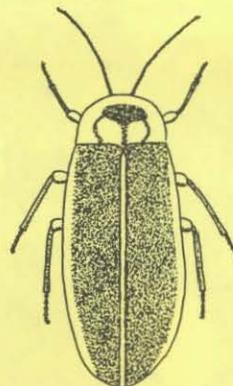
The illustration suggests that the firefly has only two body parts. In fact, the head is hiding under the "shield" covering the thorax.

Yellows & Greens

*I've had the blues
The reds and the pinks
One thing for sure
Love stinks*



BEETLE



LIGHTNING BUG
(Also a beetle)

Obviously, fireflies are most easily identified by their flashing tail lights. This light is produced in an amazingly efficient manner.

The yellow, greenish, or bluish light emitted by lightning bugs is produced by the oxidation of a substance called luciferin.

Ninety-eight percent of the energy produced by this chemical reaction is given off as light while only two percent is lost as heat.

By controlling the delivery of oxygen to the light-producing organs, the firefly regulates its flashing.

While some other insects glow, only a firefly can turn its light on and off in a distinct pattern. The pattern is key as each species has its own flashing rhythm.

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The male of one species, for example, flashes his beetle beacon every 5.8 seconds. Essentially, he's introducing himself and is looking for a female of his species to flash him back.

It is not only the interval between these mating signals that can separate species but also the color, duration, intensity, grouping, and distance flown between flashes. Think of it as a visual Morse code.

As you watch this tiny fireworks display on a quiet summer evening, you may notice that some of the flashers stay down in the grass. These are probably females since, in some species, the females are wingless. Some folks refer to these grounded girls as glowworms.

Should a male find a responsive female, more signals and responses complete this bioluminescent courtship. Soon he lands, they mate, and she will stop signaling unless...

Femme Fatale

*You love her
But she loves him
And he loves somebody else
You just can't win
And so it goes
Till the day you die*

... unless she is a female from a species that can change her flashing pattern. Why would she do this? It's called aggressive mimicry and here's how it works.

Imagine you're a hungry female firefly that's just mated. There's no need to attract another male for breeding purposes. Over your head, though, horny guys from other species continue to flash their luminous mating lures.

As your stomach grumbles, you respond with a species appropriate mating pattern. Down the boys fly excitedly lighting their little love lamps... for the last time. *Bon appetit!*

Yes, fireflies are carnivorous. Besides other insects, fireflies will eat snails, slugs, and other small ground creatures.

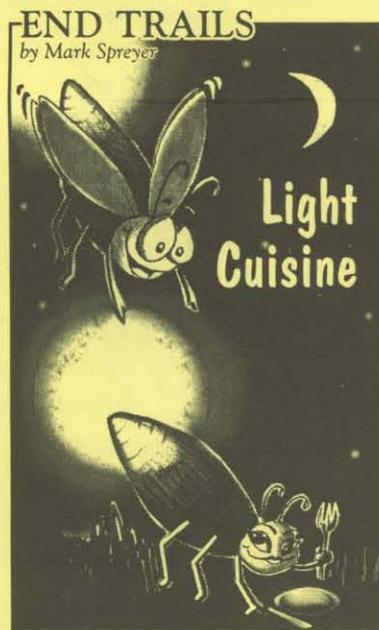


Illustration by Jessica Rolczynski ©2011

Summer's Arrival

After a long cold winter, the first signs of spring, be it an opening crocus or a calling red-winged blackbird, are noted with much anticipation.

Spring may be warmly welcomed (pun intended) but it is a hectic season. Birds have to mate and migrate NOW! Forest flowers have to grow and blossom NOW! The grass has to be mowed and the garden planted NOW!

Signs of summer's arrival are, like the season, a bit more slow and subtle. The first quiet flashing of a firefly counts as one of my clues that summer is upon us.

You may wonder where the lightning bugs came from? In fact, they are here all year.

They spend the winter as larvae burrowed in the ground. In spring, the larvae emerge and feed, often in swampy or wet areas. Later in spring they pupate in an earthen cell arriving as adults usually in June.

Fireflies may put on a show for us in summer but when it comes to our local weather extremes, they've been through it all which brings me back to our rock song.

With apologies to the J. Geils band, I've taken a few liberties with the words in the last stanza of their classic tune, *Love Stinks*.

*I've flown by diamonds
I've crawled on minks
I've been through it all
Love blinks.*



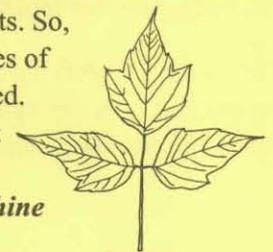
Poison Ivy

Leaves of Three Let it Be?

For years, I've shown visitors and school groups a poison ivy vine growing up a trail-side tree. Along the way, I point out a variety of wildflowers and trees such as trillium, jack-in-the-pulpit, and box-elder which

also have three leaves or leaflets. So, I've decided that the old "leaves of three" verse needs to be updated. Now, I tell folks the following:

*Leaves of three, no need to whine
Unless, of course, it is a vine.*



Box-elder

PROGRAMS

Program Basics: TO MAKE RESERVATIONS for programs (except for bird banding open houses), PLEASE CALL US AT (847) 428-OWLS(6957), OR EMAIL STILLMAN AT: stillnc@wildblue.net. Remember to include your name, phone number, and the number of people that will be attending

If less than 5 - 10 people (varying with the activity) have called two days prior to a program, the program could well be cancelled. So, don't forget to call the nature center in advance. If you discover that you are unable to attend, please call to cancel your reservations. This courtesy will be greatly appreciated.

THURSDAY TREKKERS

Tired of circling the same track? Join us outside for a healthy hour-long walk around a lake, through the woods, and who knows where else? Why not add Stillman to your list of exercise options? Come prepared to hike the trails with shoes you don't mind getting a little wet.

Dates: Thursdays, June 2, July 7, Aug. 4
Time: 9:30 AM
Fee: None

BIRD BANDING

Watch Mark Spreyer, a licensed bird bander, measure, weigh and record data about our resident and migratory birds. Birds are not caught in a predictable manner, so come prepared to hike the trails. With luck, you'll see a bird in the hand and two in the bush. If it is raining, the banding open house will be cancelled.

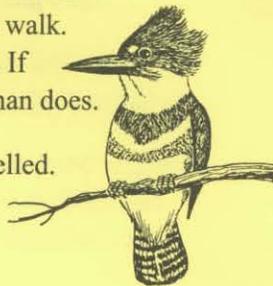
Dates: Sundays, June 5, July 3, Aug. 7
Time: 9:00 AM to Noon
Fee: None

SUNDAY MORNING BIRD WALKS

Mark Spreyer will lead a morning bird walk. Binoculars and field guides are a must. If you don't have any, don't worry, Stillman does.

If it's raining, the activity will be cancelled. Please call (847) 428-OWLS to let us know if you plan to attend.

Date: Sundays, June 12 & August 21
Time: 8:00 AM
Fee: None
Age: 10 years and up



BUGS & BUTTERFLIES

Join Stillman's naturalist and search the nature center's woods and fields for butterflies, beetles, grasshoppers and other bugs. If you've got a bug net at home, bring it along! Don't forget to call (847) 428-OWLS to make reservations.

Date: Sunday, July 17
Time: 2:00 PM
Fee: None

RAPTORS for PHOTOGRAPHERS

Now's your chance to get an unimpeded close-up of great horned, barn, and screech owls plus a peregrine falcon and broad-winged hawk. We will bring the birds out in the favorable morning light to increase your chances of getting that perfect image. Drop by anytime between 8:30 and 10:30 AM. Keep in mind that all the birds won't be available at the same moment.

Date: Saturday, July 23
Time: 8:30 - 10:30 AM
Fee: \$10/person

PRAIRIE RAMBLE

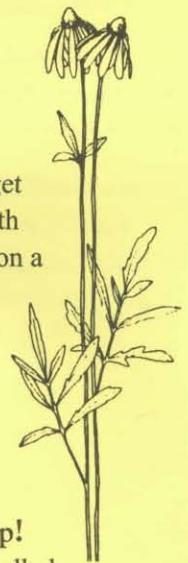
Our volunteers, under the leadership of Daria Sapp, have been working hard to get prairie plants growing in Stillman's "south forty." This is your chance to join Daria on a tour of this colorful site. Please call (847) 428-OWLS to let us know if you plan to attend.

Date: Sunday, July 24
Time: 10:00 AM

POND LIFE: Get the Whole Scoop!

This afternoon, with the help of long-handled dip nets, families will scoop into our pond in hopes of catching crayfish, dragonfly larvae, tadpoles and other rarely seen pond creatures. Dress in clothes and shoes you don't mind getting muddy.

Date: Sunday, August 14
Time: 2:00 PM
Fee: None



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If you aren't already a member, please consider joining us.

- Yes, I'd like to become or continue as a member of the Stillman Nature Center.
I enclose my tax deductible contribution of \$_____.
- I'd like to help as a volunteer with programs or land management at the Stillman Nature Center, please call me.
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